

Appendix A:

***AISWMD Local MSW
Information Form***

Association of Indiana Solid Waste Management Districts
“Pay-As-You-Throw” Technical Assistance Project
Municipal Solid Waste Information Form
(Summer 2001)

Municipalities participating in the AISWMD’s “Pay-As-You-Throw” Technical Assistance Project are required to provide information relating to current municipal solid waste programs. This document seeks the comprehensive information necessary to accurately calculate solid waste volume and revenue projections for rate-setting scenario generation. ***Use data from the most recent year if 2001 annual data are not available.***

For questions regarding this form, please contact Jeanann Georgas at (219) 663-8526.

PART A: *Program Features and Community Characteristics*

Municipal Solid Waste Information

Collection Arrangement:

Current collection arrangement (circle one):

Municipal

Contract/Franchise

Private Subscription

Note: If municipality anticipates changing the collection arrangement as part of PAYT implementation, indicate preference for new arrangement:

Municipal

Contract/Franchise

Private Subscription

Pay-As-You-Throw Preference, if known (circle):

Full-cost Unit-pricing

Disposal only unit

Modified-pricing

Variable-sized Can

MSW Volume:

Tonnage landfilled in 2001

Tonnage recycled in 2001

Tonnage composted in 2001 (optional)

Tonnage diverted in 2001 from other programs (list)

Total MSW volume (in tons) for 2001

Population Characteristics

Number of people served in 2001

Number of households served in 2001

Expected Population Growth

Expected annual increase in number of households (optional) _____

Community Characteristics

Non-residential solid waste service customers (if applicable)

Number of businesses served _____

Percentage of businesses with dumpster service _____ %

Percentage of businesses recycling _____ %

Number of institutions (churches, schools, etc.) _____

Percentage of institutions with dumpster service _____ %

Percentage of institutions recycling _____ %

PART B: 2001 MSW Program Costs

Note to Preparer: Include all MSW costs to be financed through the contractor-generated sample rate structures.

Fixed Trash Collection Costs for 2001

These expenses remain constant regardless of the amount of trash collected. Examples include administrative salaries, rent/building costs, debt service on vehicles.

Physical facilities (rent, debt service, maintenance, utilities, etc.) \$ _____

Salaries & benefits (administrative, collection personnel, etc.) \$ _____

Collection vehicle cost (trash & recyclables)

 Debt service/amortization \$ _____

 Maintenance \$ _____

 Operation \$ _____

Contractor fees (if, applicable) \$ _____

Billing (personnel, computer, collections, postage, printing) \$ _____

Other fixed costs (list) _____ \$ _____

_____ \$ _____

_____ \$ _____

Total Fixed Trash Collection Costs: \$ _____

Variable Trash Collection Program Costs for 2001

These expenses vary with the amount of trash collected and disposed. These costs include disposal costs, transfer station costs, transportation costs associated with hauling trash to a landfill, etc.

Salaries & benefits \$ _____

Vehicle cost

 Debt service or amortization \$ _____

 Maintenance \$ _____

 Operation \$ _____

Tipping fees (including any taxes, surcharges, etc.)
Tons collected _____
Tipping fee (per ton) \$ _____ \$ _____

If community has a contracted disposal fee minimum, list \$ _____

Other costs that vary with amount of trash \$ _____

Total Variable Cost for Trash Service \$ _____

Fixed Recycling Collection and Processing Costs for 2001

These costs remain constant regardless of the volume of recyclables collected.

Contracted recycling costs, if applicable \$ _____

Physical facilities (rent/debt service, utilities) \$ _____

Salaries & benefits \$ _____

Vehicle cost
Debt service or amortization \$ _____

Maintenance \$ _____

Operation \$ _____

Equipment (processing or sorting equipment) \$ _____

Other Recycling program fixed costs (education, promotion, etc.) \$ _____

Total Fixed Recycling Costs \$ _____

Variable Recycling Collection and Processing Costs for 2001

These cost vary with the volume of recyclables collected and processed.

Salaries and benefits \$ _____

Vehicle costs (vehicles transporting materials to reprocessors)
Debt service or amortization \$ _____

Maintenance \$ _____

Operation \$ _____

Equipment costs (balers, compactors, forklift/ "Bobcat")	
Debt service or amortization	\$ _____
Maintenance	\$ _____
Operation	\$ _____
Contractor fees, if applicable	\$ _____
Other recycling program variable costs (brokers fees, bins)	\$ _____
Total Variable Recycling Costs	\$ _____

Additional MSW Programs Costs for 2001

Please identify additional program costs, if any, that your community wishes to finance using the rate structure. Examples include education programs, promotional events, special collection programs, etc.

List:

_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

PART C: MSW Program Revenues for 2001

Identify the annual amount of revenue generated from each of the following sources.

General Fund resources \$ _____

User Fees (identify rates charged & households served)

Rate(s): _____ Households(#) _____ \$ _____

_____ Households(#) _____ \$ _____

_____ Households(#) _____ \$ _____

Total User Fee Annual Revenue \$ _____

Special Tax Levy for solid waste service

Total Special Tax Levy Revenue: \$ _____

Other revenue sources: \$ _____

Total Revenue from Other Sources \$ _____

Total MSW program revenue from all sources \$ _____

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Appendix B:

***Lawrence County SWMD
Disposal PAYT Spreadsheet***

Lawrence County SWMD "Pay-As-You-Throw"
10-Apr-00

Community Characteristics:

Community	Pop	Households	MSW volume(tons)	Wkly set-out(lbs)	Disposal
Bedford	14667	5989	5818	37.36337	\$201,000.00
Mitchell	4956	1988	2000	38.6937	\$71,000.00
Oolitic	1492	539	727	51.87669	\$26,000.00
Unincorp	24474	9510	9637	38.57074	\$342,000.00
Total	45589	18026	18182	41.62613	\$640,000.00
	45539	17587			

Indicators:

	Disp/hh	Wkly disp
Bedford	\$33.56153	\$0.64541
Mitchell	\$35.71429	\$0.68881
Oolitic	\$48.23748	\$0.92764
Uninc.	\$35.96215	\$0.69158

Avg. \$38.37 \$0.74

Unaccounted:

Bulk items
Loose loads

Minimum Unit Disposal Cost(based on 1st qtr. 2000 volume):

Total MSW(T)	3423.23
Total MSW(lbs.)	6846460
Unit size(lbs)	30
No. of units	228215.3333
Disposal cost/ton	\$35.50
Disposal cost/lb.	0.01775
Unit cost(30 lb.)	0.5325

Potential Disposal Cost Increases:

Assume 5% annual increase in tipping fee

Year:	Tip fee(T)	Disp./lb	Unit cost(30 lbs.)
2001	\$37.28	0.01864	\$0.56
2002	\$39.14	0.01957	\$0.59
2003	\$41.10	0.02055	\$0.62
2004	\$43.15	0.02158	\$0.65
2005	\$45.31	0.02265	\$0.68

* At a minimum, the per unit disposal cost should be \$0.5325.

If units were sold in packages of 10 units, minimum cost is \$5.33

Per unit disposal cost does not include bag price, sales tax or other charges.

Appendix C:

Model PAYT Timeline

Association of Indiana Solid Waste Management Districts
“Pay-As-You-Throw” Technical Services Project
Model Preliminary Timeline

June 1, 2000

This timeline represents a model preliminary listing of the activities associated with introducing “Pay-As-You-Throw” financing and the anticipated accomplishment dates. Once a community begins the formal planning process, the activities and dates may be revised based on specific conditions. Timeline may be expedited if tasks are completed ahead of schedule.

<u>Month</u>	<u>Activity</u>
1-2	Municipality to provide information for rate structure calculations: Population and household information MSW Demand for 1999 MSW Program costs for 1999 and start-up year Preferences for PAYT options: (1) Disposal unit (container & size) (2) Rate structure option (unit, variable-size, modified) (3) Billing system
2-3	Consultant to develop PAYT rate alternatives Consultant to calculate program revenues for various options
4	Consultant to make presentation on various rate structures and revenue projections.
4-5	Municipality to review and approve rate structure option Municipality to identify a PAYT start-up date
5-9	Consultant, Municipality and County SWMD jointly prepare for Implementation of PAYT financing: (1) Development of ordinances for rate structure, household requirements, etc. as required; (2) Development of educational materials, planning for promotional events, planning for public information activities; (3) Coordination with sticker/tag/bag/can manufacturer; (4) Plan for increased recyclables volume (capamunicipality & bins); (5) Establish sales outlet network for stickers/bags/cans; (6) Establish PAYT billing protocol; (7) Coordinate with businesses and institutions; (8) Establish in-house Customer Service Office for PAYT; and, (9) Designate “Rapid Response Team” for challenges.

<u>Month</u>	<u>Activity</u>
7	Kick-off formal public information and promotional campaign
9	Introduce “Pay-As-You-Throw” Program monitoring activities to detect start-up problems and conduct “Rapid Response Team” activities where necessary.
10	Assess first month performance of PAYT <ol style="list-style-type: none">(1) MSW volume;(2) Revenue generation;(3) Recycling volume and processing;(4) Start-up challenges;(5) Make necessary modifications to address challenges.
11	Assess second month performance of PAYT <ol style="list-style-type: none">(1) MSW volume;(2) Revenue generation;(3) Recycling volume and processing;(4) Transitional challenges;(5) Make necessary modifications to address challenges.
12	Assess third month performance of PAYT <ol style="list-style-type: none">(1) MSW volume;(2) Revenue generation;(3) Recycling volume and processing;(4) Transitional challenges;(5) Make necessary modifications to address challenges.
13	Resume normal program operations <ol style="list-style-type: none">(1) Discontinue PAYT Customer Service Office(2) Discontinue “Rapid Response Team”(3) Continue program monitoring(4) Consultant to document PAYT program performance.

Appendix D:

***City of Shelbyville
PAYT Spreadsheets***

WORKSHEET 1**City of Shelbyville MSW Information & PAYT Rate Alternatives****May 16, 2000***Data as reported by the City of Shelbyville***PART A:****MSW Characteristics**

MSW Volume(Tons):	
Landfilled	6,476
Recycled	937
Composted	604
Leaves	450
Concrete	280
Total MSW	8,747
Diversion	2,271
Diversion rate	25.96%

Population Characteristics

Population	16,400
Households served	6,350
Exp. annual growth	120
Household Projections	
2000	6,350
2001	6470
2002	6590
2003	6710
2004	6830
Household size:	
2.58	

MSW Volume Indicators:

Trash/household(lbs.)	
Annual	2,039.69
Weekly	39.22
Diversion/household	
Annual	715.28
Weekly	13.76
Weekly set-out:	
Assume each can weighs 30 lbs.	
1.31	

PART B:**Trash Collection Costs:**

Salaries & benefits	\$203,253
Vehicle depreciation	\$54,000
Total	\$257,253

Household MSW Indicators:

Trash collection cost/household	
Annual	\$40.51
Monthly	\$3.38

Trash Disposal Variable Costs:

Salaries & benefits	\$29,000
Disposal	\$199,396
Total	\$228,396
Total Trash Cost	\$485,649

Trash disposal cost/household

Annual	\$35.97
Monthly	\$3.00

Total Trash cost/household

Annual	\$76.48
Monthly	\$6.37

Recycling Fixed Costs:

Contractor	\$98,229
Total Recycling costs	\$98,229

Recycling cost/household

Annual	\$15.47
Monthly	\$1.29

Yard Waste Costs:

Salaries & benefits	\$62,000
Disposal	\$11,400
Total yard waste costs	\$73,400

Yard waste cost/household

Annual	\$11.56
Monthly	\$0.96

Total MSW Costs: \$657,278**MSW Cost/household**

Annual	\$103.51
Monthly	\$8.63

Fixed/Variable Cost Analysis**Fixed costs:**

Trash	\$257,253
Recycling	\$98,229
Total	\$355,482

Variable costs:

Disposal	\$228,396
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WORKSHEET 2**City of Shelbyville PAYT Rate Alternatives(no change in MSW volume)**

May 30, 2000

Fixed/Variable Cost Analysis**Households****Avg. weekly set-out**

Fixed costs:		2000	6,350
Trash	\$257,253	2001	6,470
Recycling	\$98,229	2002	6,590
Total	\$355,482	2003	6,710
		2004	6,830
Variable costs:			
Disposal	\$228,396		
Total MSW Costs	\$583,878		

Number of Cans (30 lbs):

Tons x 2000/30 lbs	
431,733 car	431,733
1 can/week	330,200
extra cans	101533

Alternative Rate Scenarios**Projected Revenue*****Alternative 1: Fixed Costs & Disposal Fee******Alternative 1:***

Monthly Basic Fee	Formula: fixed costs/(households x 12 months)	\$4.67
Per can fee	disposal costs/number of cans	\$0.53

Monthly Basic Fee	\$355,482.00
Can disposal fees	\$228,396.00
Total	\$583,878.00

Alternative 2: Modified Including 1 Can/week***Alternative 2:***

Monthly Basic Fee	Alt. 1 Basic plus 4.3 cans per month disposal	\$6.96
Additional can fee	Alt. 1 "per can" fee	\$0.53

Monthly Basic Fee	\$530,164.87
Additional can fees	\$53,713.13
Total	\$583,878.00

Alternative 3: Disposal Only Option***Alternative 3:***

No Monthly Basic Fee		
Per can fee	disposal costs/number of cans	\$0.53

Disposal fees	\$228,396.00
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Alternative 4: Second Can Disposal Only***Alternative 4:***

No Monthly Basic Fee, includes 1 can per week		
Additional Can Fee	disposal costs/additional cans	\$2.25
Note: This option asks only those throwing away < 1 can to finance all disposal costs		

Disposal fees	\$228,396.00
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Alternative 5: Unit- Pricing (all costs covered through sale of disposal stickers)***Alternative 5:***

Per can fee	\$1.35
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Sticker fees	\$583,878.00
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WORKSHEET 3**City of Shelbyville PAYT Rate Alternatives(assume 40% reduction in MSW volume)**

May 30, 2000

<u>Fixed/Variable Cost Analysis</u>		<u>Households</u>	<u>Avg. weekly set-out</u>	<u>MSW Projection</u>
Fixed costs:		2000	6,350	0.7844942
Trash	\$257,253	2001	6,470	
Recycling	\$98,229	2002	6,590	
Total	\$355,482	2003	6,710	
		2004	6,830	
Variable costs:				
Disposal(tipping &pers) \$148,638			Disposal charge:	Tons x 2000/30 lbs.
			Ton \$30.79	259040 total cans
			pound 0.015395	257556 weekly
			30-lb can 0.46185 plus pers.	1484 additional
Total MSW Costs \$504,120				\$0.57

Alternative Rate Scenarios**Projected Revenue****Alternative 1: Fixed Costs & Disposal Fee****Alternative 1:**

Formula:		
Monthly Basic Fee	fixed costs/(households x 12 months)	\$4.67
Per can fee	disposal costs/total number of cans	\$0.57

Monthly Basic Fee	\$355,482.00
Can disposal fees	\$148,638.00
Total	\$504,120.00

Alternative 2: Modified Including 1 Can/week**Alternative 2:**

Monthly Basic Fee	Alt. 1 Basic plus 4.3 cans per month disposal	\$7.15
Additional can fee	Alt. 1 "per can" fee	\$0.57

Monthly Basic Fee	\$544,951.84
Additional can fees	\$851.52
Total	\$545,803.37

Note: Each household charged for 1 can per week, but this exceeds expected generation, this option generates revenues exceeding cost projections

Alternative 3: Disposal Only Option**Alternative 3:**

No Monthly Basic Fee		
Per can fee	disposal costs/number of cans	\$0.57

Disposal fees	\$148,638.00
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Alternative 4: Second Can Disposal Only**Alternative 4:**

No Monthly Basic Fee, includes 1 can per week		
Additional Can Fee	disposal costs/additional cans (1,484)	\$100.16

Disposal fees	\$148,638.00
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Note: This option asks only those throwing away <1 can to finance all disposal costs; current data do not indicate how many many households would be involved

Alternative 5: Unit- Pricing (all costs covered through sale of disposal stickers)**Alternative 5:**

Per can fee	Total MSW costs/number of cans	\$1.95
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Sticker fees	\$504,120.00
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Appendix E:

***Town of Utica
MSW Contract Bid Analysis
PAYT Spreadsheets***

Alternate 3: Base Response - Contractor to do Quarterly Billing & Collections
Unlimited trash collection service, Contractor to do billing.

Bidder	Year 1		Year 2		Two-Year	Yrly Avg.
		340		340		
Industrial Disposal		\$7.26		\$7.26		\$7.26
		\$29,620.80		\$29,620.80	\$59,241.60	\$29,620.80
Rumpke of Indiana		\$8.75		\$8.75		\$8.75
		\$35,700.00		\$35,700.00	\$71,400.00	\$35,700.00
Waste Management		\$11.00		\$11.00		\$11.00
		\$44,880.00		\$44,880.00	\$89,760.00	\$44,880.00

Alternate 4: Uniform Container Option - Contractor to do Quarterly Billing and Collections
Collection and disposal of up to 65 gallons of trash using a uniform container, extra fee for additional trash cans; contractor to do billing.

Bidder	Year 1		Year 2		Two-Year	Yrly Avg.
		340 Toter/sticker		340 Toter/sticker		
Industrial Disposal		\$9.31		\$9.31		\$9.31
		\$37,984.80		\$37,984.80	\$75,969.60	\$37,984.80
Rumpke of Indiana		\$8.75		\$8.75		\$8.75
		\$35,700.00		\$35,700.00	\$71,400.00	\$35,700.00
Waste Management*		\$13.00		\$13.00		\$13.00
		\$53,040.00		\$53,040.00	\$106,080.00	\$53,040.00

Does not comply with the information sought for this alternate.

Town of Utica Refuse Bid Analysis

Dec 2000

Prepared by Jeannann Georgas, consultant for AISWMD

Alternate 1: Base Response - Town to do the billing

Current service, includes unlimited trash, Town responsible for billing

Bidder	Year 1	Year 2	Two-Year	Yrly Avg.
	340	340		
Industrial Disposal	\$6.53	\$6.53	\$53,284.80	\$6.53
	\$26,642.40	\$26,642.40		\$26,642.40
Rumpke of Indiana	\$8.25	\$8.25	\$67,320.00	\$8.25
	\$33,660.00	\$33,660.00		\$33,660.00
Waste Management	\$10.00	\$10.00	\$81,600.00	\$10.00
	\$40,800.00	\$40,800.00		\$40,800.00

Alternate 2: Uniform 90-96 gallon toter - Town to do the billing

Includes up to approximately 90 gallons of trash; extra fee for additional trash; Town responsible for billing

Bidder	Year 1	Year 2	Two-Year	Yrly Avg.
	340	340		
	Trash	Toter/sticker Trash	Toter/sticker	
Industrial Disposal	\$8.53	\$8.53	\$69,604.80	\$8.53
	\$34,802.40	\$34,802.40		\$34,802.40
Rumpke of Indiana	\$8.25	\$8.25	\$67,320.00	\$8.25
	\$33,660.00	\$33,660.00		\$33,660.00
Waste Management*	\$13.00	\$13.00	\$106,080.00	\$13.00
	\$53,040.00	\$53,040.00		\$53,040.00

*Does not comply with specific information sought for this alternative

Appendix F:

City of South Bend PAYT Spreadsheets

WORKSHEET 1
City of South Bend MSW Information & PAYT Rate Alternatives
January 2001
Data as reported by the City of South Bend

PART A:

MSW Characteristics

MSW Volume(Tons):

Landfilled 35,489
 Recycled 6,250
 Composted 25,000
 Leaves 0
 Concrete 0

Total MSW

66,739

Diversion

31,250

Diversion rate

48.84%

Population Characteristics

Population 100,000
 Households served 38,000
 Exp. annual growth

Household Projections

2000 38,000
 2001 38,000
 2002 38,000
 2003 38,000
 2004 38,000

Household size:

2.63

Businesses served:

270

MSW Volume Indicators:

Trash/household(lbs.)
 Annual 1,866.79
 Weekly 35.90

Diversion/household
 Annual 1,644.74
 Weekly 31.63

Weekly set-out:

Assume each can weighs 30 lbs.
 1.20

WORKSHEET 2

City of South Bend PAYT Rate Alternatives(no change in MSW volume)
(Revised March 16, 2001)

Fixed/Variable Cost Analysis		Households
Fixed costs:		2000 38,000
Trash	\$2,450,186	2001 38,000
Recycling		2002 38,000
Total	\$2,450,186	2003 38,000
		2004 38,000
Variable costs:		
Disposal	\$609,982	
Total MSW Costs	\$3,060,168	

Proposed Container Distribution

35 gallon	3300
65 gallon	9900
95 gallon	19800
	33000

Estimated Equipment Expense (four-year)

Size:	Unit:	Mo. expense:
35 gallon	\$28.00	\$0.58
65 gallon	\$37.00	\$0.77
95 gallon	\$45.00	\$0.94

Avg. weekly set-out(35 gallon cans)
1,181,119

Number of Cans (35 lbs.):

Tons x 2000/35 lbs	
Total cans	2,026,800
1 can/week	1,716,000
extra cans	310,800

Sample Distribution:		Households		Extra stickers	
1 can	30%	9,900	2 can limit	3 can limit	0
2 cans	30%	9,900			0
3 cans	30%	9,900			0
3 or more	10%	3300			171,600
Extra stickers		33,000			858,000
					171,600

Estimated Disposal Cost Per Container

Size:	Disp. unit:	Mo. expense:
35 gallon	0.2975	1.27925
65 gallon	0.5525	2.37575
95 gallon	0.8075	3.47225

Alternative Rate Scenarios (Not Including Recycling fees or Senior discounts)

Rate Scenario: Formula for calculating costs:

Alternative 1: Fixed Costs & Disposal Fee

Per can fee	fixed costs/(households x 12 months)	disposal costs/number of cans	Revenue:
	\$6.19	\$0.26	

Alternative 2: Modified Including 1 Can/week

Monthly Basic Fee	Alt. 1 Basic plus 4.3 cans per month disposal	Revenue:
	\$7.29	
Additional can fee	Alt. 1 "per can" fee	
	\$0.26	

Alternative 3: Variable-Sized Container

Monthly Basic Fee:	(fixed costs/(households x 12 months)) + disposal fee	Plus equip. fee	Rates:	Distribution:	Monthly revenue:	Total Revenue:
35 gallon level	\$6.19	\$7.47	\$0.58	\$8.05	\$300	\$26,564.74
65 gallon level	\$6.19	\$8.56	\$0.77	\$9.33	9900	\$92,405.83
95 gallon level	\$6.19	\$9.66	\$0.94	\$10.60	19800	\$209,822.35

NOTE: Alternative 3 charges for disposal limit each month even though households may not generate full container each set-out.
Revenue in excess of costs due to disposal charges in excess of actual trash set-out.

Alternative 4: Two-Can Limit

Monthly Basic Fee:	(fixed costs/households x 12)) + disposal fee of 65 gallons of trash	Monthly fees
Two-Can level	\$6.19	\$8.56
Additional cans(disposal only)	858,000	\$0.26
	Stickers:	

Alternative 5: Three-Can Limit

Monthly Basic Fee:	(fixed costs/(households x 12)) + disposal of 95 gallons trash	Monthly fees
Three-Can Level	\$6.19	\$9.66
Additional cans	171,600	\$0.26
	Stickers:	

NOTE: Alternatives 4 & 5 raise revenues in excess of costs since all households are charged as though they generate 2 or 3 cans of trash per week.
Actual average disposal set-out is 1.18 cans per week.

Alternative 6: Unit-Based Pay-by-the-Bag/Can

All inclusive unit rate:	(fixed costs + disposal costs)/((landfill * 2000) / 35 gallon container)	Unit Fee:
	Costs:	
	\$3,060,168.00	
	2,026,800	\$1.51

Waste Generation Levels:

	Households Wkly units	Tot units	Revenues:
1 can	9,900	514,800	\$777,271.80
2 cans	9,900	1,029,600	\$1,554,543.60
3 cans	13,200	2,059,200	\$3,109,087.20
Total	33,000	3,603,600	\$5,440,902.61

NOTE: This alternate assumes households will throw away trash bags/cans at same weekly rate with unit pricing.
If schedule is altered to reflect anticipated trash volume reduction, unit fee increases due to constant fixed costs spread over lower # of units.

ADDITIONAL VARIABLE-SIZE CONTAINER RATE SCENARIOS

Alternative 3: Variable-Sized Container

Monthly Basic Fee: (fixed costs/(households x 12 months)) + disposal fee

35 gallon level	\$6.19	\$1.28	\$7.47	Plus equip. fee	\$0.59	Annual Rev.	\$318,776.90
65 gallon level	\$6.19	\$2.38	\$8.56		\$0.77		\$1,108,869.90
95 gallon level	\$6.19	\$3.47	\$9.66		\$0.94		\$2,517,868.20
							\$3,945,515.00

Alternative 3:

Rates:	Distribution	Monthly Rev.	Annual Rev.
	\$8.05	3300	\$26,564.74
	\$9.33	9900	\$92,405.63
	\$10.60	19800	\$209,822.35
	Total		\$328,792.92 Total

Alternative 3A:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$4.50	\$1.28	\$5.78	\$0.580	\$251,856.00
65 gallon level	\$4.50	\$2.38	\$6.88	\$0.770	\$908,820.00
95 gallon level	\$4.50	\$3.47	\$7.97	\$0.94	\$2,117,016.00
					\$3,277,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$6.36	3,300	\$20,986.00	\$251,856.00
\$7.65	9,900	\$75,735.00	\$908,820.00
\$8.91	19,800	\$176,418.00	\$2,117,016.00
	Total	\$273,141.00 Total	\$3,277,692.00

Alternative 3B:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$5.00	\$1.28	\$6.28	\$0.580	\$271,656.00
65 gallon level	\$5.00	\$2.38	\$7.38	\$0.770	\$968,220.00
95 gallon level	\$5.00	\$3.47	\$8.47	\$0.94	\$2,235,816.00
					\$3,475,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$6.86	3,300	\$22,638.00	\$271,656.00
\$8.15	9,900	\$80,685.00	\$968,220.00
\$9.41	19,800	\$186,318.00	\$2,235,816.00
	Total	\$289,641.00 Total	\$3,475,692.00

Alternative 3C:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$5.50	\$1.28	\$6.78	\$0.580	\$291,456.00
65 gallon level	\$5.50	\$2.38	\$7.88	\$0.770	\$1,027,620.00
95 gallon level	\$5.50	\$3.47	\$8.97	\$0.94	\$2,354,616.00
					\$3,673,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$7.36	3,300	\$24,288.00	\$291,456.00
\$8.65	9,900	\$85,635.00	\$1,027,620.00
\$9.91	19,800	\$196,218.00	\$2,354,616.00
	Total	\$306,141.00 Total	\$3,673,692.00

Alternative 3D:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$6.00	\$1.28	\$7.28	\$0.580	\$311,256.00
65 gallon level	\$6.00	\$2.38	\$8.38	\$0.770	\$1,087,020.00
95 gallon level	\$6.00	\$3.47	\$9.47	\$0.94	\$2,473,416.00
					\$3,871,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$7.86	3,300	\$25,938.00	\$311,256.00
\$9.15	9,900	\$90,585.00	\$1,087,020.00
\$10.41	19,800	\$206,118.00	\$2,473,416.00
	Total	\$322,641.00 Total	\$3,871,692.00

Alternative 3E:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$6.50	\$1.28	\$7.78	\$0.580	\$331,056.00
65 gallon level	\$6.50	\$2.38	\$8.88	\$0.770	\$1,146,420.00
95 gallon level	\$6.50	\$3.47	\$9.97	\$0.94	\$2,592,216.00
					\$4,069,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$8.36	3,300	\$27,588.00	\$331,056.00
\$9.65	9,900	\$95,535.00	\$1,146,420.00
\$10.91	19,800	\$216,018.00	\$2,592,216.00
	Total	\$339,141.00 Total	\$4,069,692.00

Alternative 3F:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$7.00	\$1.28	\$8.28	\$0.580	\$350,856.00
65 gallon level	\$7.00	\$2.38	\$9.38	\$0.770	\$1,205,820.00
95 gallon level	\$7.00	\$3.47	\$10.47	\$0.94	\$2,711,016.00
					\$4,267,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$8.86	3,300	\$29,238.00	\$350,856.00
\$10.15	9,900	\$100,485.00	\$1,205,820.00
\$11.41	19,800	\$225,918.00	\$2,711,016.00
	Total	\$355,641.00 Total	\$4,267,692.00

Alternative 3G:

Monthly Basic Fee:	Basic rate	Disposal	Service Rate	Equip. cost	Annual Rev.
35 gallon level	\$7.50	\$1.28	\$8.78	\$0.580	\$370,656.00
65 gallon level	\$7.50	\$2.38	\$9.88	\$0.770	\$1,265,220.00
95 gallon level	\$7.50	\$3.47	\$10.97	\$0.94	\$2,829,816.00
					\$4,465,692.00

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$9.36	3,300	\$30,888.00	\$370,656.00
\$10.65	9,900	\$105,435.00	\$1,265,220.00
\$11.91	19,800	\$235,818.00	\$2,829,816.00
	Total	\$372,141.00 Total	\$4,465,692.00

Full-Cost of Service Flat-Rate Alternatives

Alternative FC1:

Flat-rate unlimited trash service	Monthly Rate	Monthly rev	Annual Rev.
	\$6.71	33,000	\$2,657,514.32

Accts.	33,000	\$0.00	\$0.00
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ADDITIONAL VARIABLE-SIZE CONTAINER RATE SCENARIOS
Not including container equipment cost

Alternative 3A:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$4.50	\$1.28	\$5.78
\$4.50	\$2.38	\$6.88
\$4.50	\$3.47	\$7.97

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$5.78	3,300	\$19,074.00	\$228,888.00
\$6.88	9,900	\$68,112.00	\$817,344.00
\$7.97	19,800	\$157,806.00	\$1,893,672.00
Total		\$244,992.00	\$2,939,904.00

Alternative 3B:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$5.00	\$1.28	\$6.28
\$5.00	\$2.38	\$7.38
\$5.00	\$3.47	\$8.47

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$6.28	3,300	\$20,724.00	\$248,688.00
\$7.38	9,900	\$73,062.00	\$876,744.00
\$8.47	19,800	\$167,706.00	\$2,012,472.00
Total		\$261,492.00	\$3,137,904.00

Alternative 3C:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$5.50	\$1.28	\$6.78
\$5.50	\$2.38	\$7.88
\$5.50	\$3.47	\$8.97

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$6.78	3,300	\$22,374.00	\$268,488.00
\$7.88	9,900	\$78,012.00	\$936,144.00
\$8.97	19,800	\$177,606.00	\$2,131,272.00
Total		\$277,992.00	\$3,335,904.00

Alternative 3D:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$6.00	\$1.28	\$7.28
\$6.00	\$2.38	\$8.38
\$6.00	\$3.47	\$9.47

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$7.28	3,300	\$24,024.00	\$288,288.00
\$8.38	9,900	\$82,962.00	\$995,544.00
\$9.47	19,800	\$187,506.00	\$2,250,072.00
Total		\$294,492.00	\$3,533,904.00

Alternative 3E:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$6.50	\$1.28	\$7.78
\$6.50	\$2.38	\$8.88
\$6.50	\$3.47	\$9.97

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$7.78	3,300	\$25,674.00	\$308,088.00
\$8.88	9,900	\$87,912.00	\$1,054,944.00
\$9.97	19,800	\$197,406.00	\$2,368,872.00
Total		\$310,992.00	\$3,731,904.00

Alternative 3F:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$7.00	\$1.28	\$8.28
\$7.00	\$2.38	\$9.38
\$7.00	\$3.47	\$10.47

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$8.28	3,300	\$27,324.00	\$327,888.00
\$9.38	9,900	\$92,862.00	\$1,114,344.00
\$10.47	19,800	\$207,306.00	\$2,487,672.00
Total		\$327,492.00	\$3,929,904.00

Alternative 3G:

Monthly Basic Fee:

35 gallon level
65 gallon level
95 gallon level

Basic rate	Disposal	Service Rate
\$7.50	\$1.28	\$8.78
\$7.50	\$2.38	\$9.88
\$7.50	\$3.47	\$10.97

Rev'd rates	Acct. Dist.	Monthly Rev.	Annual Rev.
\$8.78	3,300	\$28,974.00	\$347,688.00
\$9.88	9,900	\$97,812.00	\$1,173,744.00
\$10.97	19,800	\$217,206.00	\$2,606,472.00
Total		\$343,992.00	\$4,127,904.00

**Full-Cost of Service Flat-Rate Alternatives
Alternative FC1:**

Alternative 5: Three-Can Limit

Monthly Basic Fee: (fixed costs/(households x 12)) + disposal of 95 gallons trash \$6.19 \$3.47 \$9.66
Three-Can Level Stickers: 171,600 \$0.26
Additional cans

Alternative 5:

Monthly fees \$3,825,197.00
Sticker fees \$43,758.00
Total \$3,888,955.00

**NOTE: Alternatives 4 & 5 raise revenues in excess of costs since all households are charged as though they generate 2 or 3 cans of trash per week.
Actual average disposal set-out is 1.18 cans per week.**

Alternative 6: Unit-Based Pay-by-the-Bag/Can

All inclusive unit rate: (fixed costs + disposal costs)/((landfill * 2000) / 35 gallon container)
Costs: 35 gallon Units: Unit Fee: \$1.51
\$3,060,168.00 2,026,800

Waste Generation Levels:

	Households	Wkly units	Tot units	Revenues:
1 can	9,900	9,900	514,800	\$777,271.80
2 cans	9,900	19,800	1,029,600	\$1,554,543.60
3 cans	13,200	39,600	2,059,200	\$3,109,087.20
Total	33,000	69,300	3,603,600	\$5,440,902.61

**NOTE: This alternate assumes households will throw away trash bags/cans at same weekly rate with unit pricing.
If schedule is altered to reflect anticipated trash volume reduction, unit fee increases due to constant fixed costs spread over lower # of units.**

Appendix G:

***City of Warsaw
PAYT Spreadsheets***

MSW Cost and "Pay-As-You-Throw" Rate Scenarios

DATE: July 2001
COMMUNITY: City of Warsaw

WORKSHEET 1

PART A:

MSW Characteristics

MSW Volume(Tons):	4,867
Landfilled	0
Recycled	7,781
Composted	0
Leaves	0
Concrete	0
Total MSW	12,648
Diversion	7,781
Diversion rate	61.52%
Tipping fee(ton):	\$18.98

Population Characteristics

Population	12,415
Households served	5,101
Exp. annual growth	2.00%
Household Projections	
2000	5,203
2001	5,307
2002	5,413
2003	5,521
2004	5,632
Household size:	
2.43	
Businesses served:	11

MSW Volume Indicators:

Trash/household(lbs.)	
Annual	1,908.12
Weekly	36.69
Diversion/household	
Annual	3,050.77
Weekly	58.67
Weekly set-out:	
Assume each can weighs 30 lbs.	
1.22	

PART B:

Trash Collection Costs:

Physical facilities	\$2,500
Salaries & benefits	\$109,027
Vehicle depreciation	\$30,500
Vehicle maint.	\$5,183
Vehicle operation	\$13,475
Contractor	
Billing	
Other:	
Liability ins.	
Licenses	
Admin. fees	
Total	\$160,686

Variable Trash Collection Costs:

Seasonal personnel	\$8,453
Total	\$8,453

Trash Disposal Variable Costs:

Salaries & benefits	\$92,362
Disposal other	
Total	\$92,362

Total Trash Cost	\$261,501
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Recycling Fixed Costs:

City has no curbside recycling costs

Total Recycling costs	\$0
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Yard waste/Composting Costs:

Salaries & benefits	\$59,224
Vehicle depreciation	
Vehicle maintenance	\$2,062
Vehicle operation	\$4,480
Equipment	\$22,180
Educ. & Promo.	\$1,500
Contractor	\$13,000

Total yard waste	\$102,426
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Additional MSW Costs:

Total add'l costs	\$0
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Total MSW Costs:	\$363,927
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Total MSW Costs less yard waste:	\$261,501
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Household MSW Indicators:

Trash collection cost/household	\$33.16
Annual	
Monthly	\$2.76

Trash disposal cost/household	\$18.11
Annual	
Monthly	\$1.51

Total Trash cost/household	\$51.26
Annual	
Monthly	\$4.27

Recycling cost/household	\$0.00
Annual	
Monthly	\$0.00

Yard waste/household	\$20.08
Annual	
Monthly	\$1.67

MSW Cost/household (without yard waste)	\$51.26
Annual	
Monthly	\$4.27

MSW Cost/household (including yard waste)	\$71.34
Annual	
Monthly	\$5.95

Fixed/Variable Cost Analysis

Fixed costs:	
Trash	\$160,686
Recycling	\$0
Yard waste	\$102,426
Total	\$263,112

Variable costs:	
Disposal	\$92,362
Trash collection	\$8,453
Total	\$100,815

Total MSW	\$363,927
Percentage variable	27.70%
Percentage fixed	72.30%

Household Fixed costs:	
Annual	\$61.58
Monthly	\$4.30

Household variable costs:	
Annual	\$19.76
Monthly	\$1.65

PART C: MSW Program Revenues

Revenue sources:	Amount:
General Fund	\$333,400
Trash user fees	\$0
Recycling user fee	\$0
Special levy	\$0
Sale of recyclables	\$0
Large item charges	\$0
Other	\$0
Total revenue	\$333,400

PART D: PAYT Rate Scenarios

Rates reflect current costs and current MSW volume; costs do not include yard waste program
PAYT Options

Option A: Unit-Based Pricing (pay-by-the-bag)

Total Program Costs / ((landfilled tonnage *2000 lbs.) / 30 lb.)

\$0.81 per bag or can

Rates
 Per-unit-fee

Option B: Fixed & Variable cost component

Fixed component:

(Total fixed costs / number of households) / 12 months

Monthly Rate

\$4.30

Variable component:

(Total variable costs / bags and cans generated)

Per unit fee:

\$0.31

Bags generated: 324,445

Option C: Two-Can Limit with excess trash fee

Fixed component plus disposal for 2 cans trash

(Option B Monthly rate)+ (Option B 2 cans fee x 4.3 weeks)

\$4.30

\$2.67

Monthly Rate:

\$6.97

Excess Trash Can Fee:

\$0.31

Option D: Three-Can Limit with excess trash fee

Fixed component plus disposal for three cans/week

(Option B monthly rate) + (Option B 3 cans fee x 4.3 weeks)

\$4.30

\$4.01

Monthly Rate:

\$8.31

Excess Trash Fee:

\$0.31

Appendix H:

***Database of Indiana
PAYT MSW Programs***

Association of Indiana Solid Waste Management Districts
Summary of Indiana "Pay-As-You-Throw" Communities
(As of 5/28/2001)

Sorted by Alphabetically by Community

Self-reported data gathered from telephone interviews and/or written responses.

<u>Community</u>	<u>Population</u>	<u>Households</u>	<u>Collection Arrangement</u>	<u>PAYT Type</u>	<u>Recycling</u>	<u>Financing</u>	<u>Contact Name</u>	<u>Phone</u>
Adams County SWMD	33,083	13,000	Rural drop-off	Weight-ranges	Rural drop-off		Hank Meyer	(219) 724-9971
Akron, Town of	1,069	150	Municipal	Unit-based	Curbside & drop-off	User fees	Jill Runkle	(219) 893-4123
Austin, Town of	4,479	2,000	Contract	Unit-based	curbside	User fees	Willard Terry	(812) 794-3670
Bicknell, Town of	3,195	1,547	Municipal	Unit-based	Drop-off	User fees	Mayor Gordon Stinebaugh	(812) 735-3559
Bloomington, City of	66,743	26,000	Municipal	Unit-based	Curbside	Combination		
Brookville, Town of	2,926	1,032	Contract	Modified	Curbside	User fees	Alberta Sauerland	(765) 647-3322
Brown County	15,982	6,400	Private drop-off	Unit-based	Drop-off	Private	Rebecca Baugh	(812) 988-0140
Butler, City of	2,846	875	Contract	Can limit	Drop-off	User fees		(219) 868-5881
Crawford County SWMD	10,582	4,200	Rural drop-off	Unit-based	Drop-off	User fees	Tina Bowman	(812) 365-9419
Crawfordsville, City of	14,849	4,000	Municipal	Modified	Curbside	Combination	Rod Jenkins	(765) 364-5166
Delphi, City of	2,790	1,100	Municipal	Modified	Drop-off & curbside	Combination	Jay Scott	(765) 564-2353
DuBois Co. SWMD	39,682	13,000	Rural drop-off	Unit-based	Drop-off	combination	Tommy Tomison	(812) 683-8379
Elkhart, City of	43,336	17,000	Municipal	Modified	Curbside	Combination		
Ferdinand, Town of	2,519	600	Municipal	Unit-based	curbside	combination	Matt Van Kirk	(812) 367-2282
Fremont, Town of	1,468	600	Contract	Modified	drop-off	User fees	Jim Penner	(219) 495-7805
Garrett, City of	5,574	2,200	Contract	Modified	drop-off	User fees	Jenny diPaulo	(219) 357-3836
Greencastle, City of	9,913	2,600	Contract	Modified	curbside	User fees	Mayor Nancy Michael	(765) 653-3100
Hamilton, Town of	950	400		Can limit	curbside	User fees	Patricia Ackerman, Clerk-Treas	(219) 488-3607
Hammond, City of	77,363	28,000	Municipal	Container	curbside	Combination	Barbara Hooper	(219) 853-6622
Hanover, Town of	3,866	860	Municipal	Unit-based	curbside	User fees	Lucy Anderson	(812) 866-2131
Hebron, Town of	3,724	1,100	Contract	Modified	curbside	User fees	Fred Siminski, Clerk-Treasurer	(219) 966-4641
Jasper, City of	11,792	4,700	Municipal	Unit-based	curbside	Combination	Jasper Street Dept.	(812) 482-1130
Ligonier, Town of	3,617	1,200	Contract	Modified	drop-off	User fees	Helen Grecki	(219) 894-4113
Logansport, City of	16,588	6,350	Municipal	Container	curbside	Combination	Mike Fincher	(219) 732-9253
Madison, City of	12,826	4,054	Municipal	Can/bag limit	curbside	User fees	Mayor Al Huntington	(812) 265-8300
Merrillville, Town of	31,290	12,500	Subscription	Variable subscr.	Curbside & drop-off	subscription	Shawn Pettit	(219) 769-5711
Monroe County SWMD	115,130	35,000	Rural drop-off	Bags	drop-off	combination	Monroe County SWMD	(812) 349-2020
North Manchester, Town of	6,406	2,500	Contract		drop-off	Combination		
Perry County SWMD	19,350	7,700	Rural drop-off	Bags	Curbside & drop-off	User fees	Karen Stonewall	(812) 547-9787

Pike County SWMD	12,882	5,000	Rural drop-off	Bags	drop-off	Combination	Susan Haislip	(812) 354-2924
Renssalaer, City of	5,520	2,200	Municipal	Unit-based	curbside	Combination	Mike Murphy	(219) 866-7833
Rising Sun, City of	2,077	1,000	Municipal	Modified	curbside	Combination	Rae L. Gipson	(812) 438-3340
Scott County	22,939	9,100	Rural drop-off	Bags	drop-off	User fees	Iva Gasaway	(812) 752-7914-fax
Scottsburg, City of	6,218	2,500	Municipal	Unit-based	curbside (bi-weekly)	Combination	Millard Moore	(812) 752-6431
Spencer County SWMD	20,937	8,000	Rural drop-off	Bags	drop-off	Combination	Deborah Steinkamp	(812) 362-7401
Syracuse, Town of	2,984	1,000	Contract	Modified	drop-off	combination	Brian Redshaw, Town Manager	(219) 457-3348
Tell City, City of	8,039	3,200	Municipal	Unit-based	curbside	User fees	Mayor Bill Goffinett	(812) 547-5111
Topeka, Town of	1,051	400	Contract	Can limit	drop-off	Property taxes	DeWayne Bontrager	(812) 593-2300
Vevay, Town of	1,729	700	Contract	Modified	curbside	User fees	Donna Graham	(812) 427-3131
Whitley County SWMD	30,459	12,000	Rural drop-off	Unit-based	drop-off		William Grube	(219) 244-5303
Winamac, Town of	2,566	950	Municipal	Can-limit	curbside	Property taxes	Jim Conner	(219) 946-3451
Winfield, Town of	796	450	Contract	Modified	curbside	User fees	Brian Ridge, Contractor Rep.	(219) 662-8600
Winona Lake, Town of	4,400	1,418	Contract	Modified	curbside	Property taxes	Retha Hicks	(219) 267-5783

Prepared by Jeanann Georgas

Population adjustments based on US Census projections for 1999.

(as of 5/28/01)

Appendix I:

***Indiana Modified PAYT
Rate Structure Spreadsheets***

MSW Cost and "Pay-As-You-Throw" Rate Scenarios

DATE: 08/01/2001
 COMMUNITY: City of Hammond

PART A:

MSW Characteristics

MSW Volume(Tons):
 Landfilled 28,834
 Recycled 4,271
 Composted 773
 Leaves 0
 Concrete 0

Population Characteristics

Population 87,000
 Households served 26,529

MSW Volume Indicator

Trash/household(lbs.)
 Annual 2,173.77
 Weekly 41.80

Total MSW 33,878

Diversion/household
 Annual 380.26
 Weekly 7.31

Diversion 5,044

Weekly set-out:

Diversion rate 14.89%

Household size:
 3.28

Assume each can weight
 1.39

Tipping fee(ton): \$39.88

PART B:

Trash Collection Costs:

Physical facilities	\$0
Salaries & benefits	\$1,743,229
Vehicle depreciation	\$0
Vehicle maint.	\$75,000
Vehicle operation	\$125,000
Contractor	\$0
Billing	\$0
Other:	\$0
Liability ins.	\$0
Licenses	\$0

Admin. fees	\$0
[other]	
[other]	
Total	\$1,943,229

Variable Trash Collection Costs:

[Other]	\$0
Seasonal personnel	\$0
[Other]	\$0
Total	\$0

Trash Disposal Variable Costs:

Salaries & benefits	\$1,150,000
Disposal	\$1,150,000
[other]	
[other]	
Total	\$1,150,000

Total Trash Cost	\$3,083,229
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Recycling Fixed Costs:

Salaries & benefits	\$658,053
Vehicle depreciation	\$57,000
Vehicle maintenance	\$40,000
Equipment	
Educ. & Promo.	
Contractor	
Other	\$15,000

Total Fixed Recycling	\$770,053
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Recycling Variable Costs

Salaries	
Equipment costs	
Contractor fees	
Total Recycling variable	\$0
Total Recycling costs	\$770,053

Additional MSW Costs:

Special collections	\$0
[other]	
[other]	
Total add'l costs	\$0
Total MSW Costs:	\$3,863,282

Household MSW Indicators:

Trash collection cost/household	\$73.25
Annual	\$73.25
Monthly	\$6.10

Trash disposal cost/household	\$43.35
Annual	\$43.35
Monthly	\$3.61

Total Trash cost/household	\$116.60
Annual	\$116.60
Monthly	\$9.72

Recycling fixed cost/household	\$29.03
Annual	\$29.03
Monthly	\$2.42

Recycling variable cost/household	0
Annual	0
Monthly	0

MSW Cost/household	\$145.62
Annual	\$145.62
Monthly	\$12.14

Fixed/Variable Cost Analysis

Fixed costs:	\$1,943,229
Trash	\$770,053
Recycling	

Total	\$2,713,282
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Variable costs:	\$1,150,000
Disposal	\$0
Trash collection	\$0
Recycling	\$0
Total	\$1,150,000

Total MSW	\$3,863,282
Percentage variable	29.77%
Percentage fixed	70.23%

Household Fixed costs:	\$102.28
Annual	\$102.28
Monthly	\$8.52

Household variable costs:	\$43.35
Annual	\$43.35
Monthly	\$3.61

PART C: MSW Program Revenues

<u>Revenue sources:</u>	<u>Amount:</u>
General Fund	\$0
Trash user fees	\$1,436,112
Recycling user fee	\$0
Special levy	\$0
Sale of recyclables	\$0
Large item charges	\$0
[Other]	\$0
[Other]	\$0
[Other]	\$0
Total revenue	\$1,436,112

PART D: Base Year "Cost of Service" Rate Scenarios

Rates reflect current costs and current MSW volume; costs do not include yard waste program
PAYT Options

Option A: Unit-Based Pricing (pay-by-the-bag)

Total Program Costs / ((landfilled tonnage *2000 lbs.) / 30 lb.)

\$2.01 per bag or can

Rates
Per-unit-fee

Option B: Fixed & Variable cost component

Fixed component:

(Total fixed costs / number of households) / 12 months

\$8.52

Monthly Rate

Variable component:

(Total variable costs / bags and cans generated)

\$0.60

Per unit fee:

Bags generated: 1,922,267

Option C: Two-Can Limit with excess trash fee
Fixed component plus disposal for 2 cans trash

(Option B Monthly rate)+ (Option B 2 cans fee x 4.3 weeks)

\$13.67

Monthly Rate:

\$8.52

\$5.14

Excess Trash Can Fee:

\$0.60

Option D: Three-Can Limit with excess trash fee
Fixed component plus disposal for three cans/week

(Option B monthly rate) + (Option B 3 cans fee x 4.3 weeks)

Monthly Rate:

\$16.24

Excess Trash Fee:

\$8.52

\$7.72

\$0.60

PART E: Revenue Generation Scenarios

Option A: Unit-Priced Revenue

Base Year:
 Existing MSW volume: 28,834
 Disposal fee/ton: 30
 Unit size(lbs): 1,922,267
 Number of units:

Base Year:
 MSW Collection Cost: \$2,713,282
 MSW Disposal Cost: \$1,150,000

PAYT Year:
 Administrative costs \$5,000

Scenario 1:
 Reduction: 20.00%
 Unit Price: \$1.50
 Units: 1,537,813

Scenario 2:
 Reduction: 30.00%
 Unit Price: \$1.50
 Units: 1,345,587

Scenario 3:
 Reduction: 40.00%
 Unit Price: \$1.50
 Units: 1,153,360

Scenario 4:
 Reduction: 50.00%
 Unit Price: \$1.50
 Units: 961,133

Revenue Monthly: \$192,227
 Annual: \$2,306,720

Revenue Monthly: \$168,198
 Annual: \$2,018,380

Revenue Monthly: \$144,170
 Annual: \$1,730,040

Revenue Monthly: \$120,142
 Annual: \$1,441,700

PAYT Reduced Program costs: \$3,638,282

PAYT Reduced Program costs: \$3,523,282

PAYT Reduced Program costs: \$3,408,282

PAYT Reduced Program costs: \$3,293,282

Excess/shortfall: (\$1,331,562)

(\$1,504,902)

(\$1,678,242)

(\$1,851,582)

PART E: Revenue Generation Scenarios

Option B: Fixed Monthly Rate and Unit Disposal Fee

Base Year		Base Year		PAYT Year	
Existing MSW volume:	28,834	MSW Collection Cost:	\$2,713,282	Administrative costs	\$5,000
Disposal fee/ton:		MSW Disposal Cost:	\$1,150,000		
Unit size(lbs):	30				
Number of units:	1,922,267				
Households:	26529				
Scenario 1:		Scenario 2:		Scenario 3:	
Reduction:	20.00%	Reduction:	30.00%	Reduction:	40.00%
Monthly rate:	\$5.00	Monthly rate:	\$5.00	Monthly rate:	\$5.00
Unit fee:	\$0.50	Unit fee:	\$0.50	Unit fee:	\$0.50
Bags/cans:	1,537,813	Bags/cans:	1,345,587	Bags/cans:	1,153,360
Revenue:		Revenue:		Revenue:	
Monthly:	\$132,645	Monthly:	\$132,645	Monthly:	\$132,645
Annual:	\$1,591,740	Annual:	\$1,591,740	Annual:	\$1,591,740
Unit sales:	\$768,907	Unit sales:	\$672,793	Unit sales:	\$576,680
Total:	\$2,360,647		\$2,264,533		\$2,168,420
PAYT reduced		PAYT reduced		PAYT reduced	
Program costs:	\$3,638,282	Program costs:	\$3,523,282	Program costs:	\$3,408,282
Excess/(shortfall):	(\$1,277,635)	Excess/(shortfall):	(\$1,258,749)	Excess/(shortfall):	(\$1,239,862)
Scenario 4:					
Reduction:	50.00%				
Monthly rate:	\$5.00				
Unit fee:	\$0.50				
Bags/cans:	961,133				
Revenue:		Revenue:			
Monthly:	\$132,645	Monthly:	\$132,645		
Annual:	\$1,591,740	Annual:	\$1,591,740		
Unit sales:	\$480,567	Unit sales:	\$480,567		
Total:	\$2,072,307		\$2,072,307		
PAYT reduced		PAYT reduced			
Program costs:	\$3,293,282	Program costs:	\$3,293,282		
Excess/(shortfall):	(\$1,220,975)	Excess/(shortfall):	(\$1,220,975)		

PART E: Revenue Generation Scenarios

Option C: Two-Can Limit with excess trash fee
Fixed component plus disposal for 2 cans trash

Base Year	Base Year
MSW volume: 28,834	MSW Collection Cost: \$2,713,282
Disposal fee/ton: \$39.88	MSW Disposal Cost: \$1,150,000
Unit size(lbs): 30	Included units: 2759016
Number of units: 1,922,267	Excess units: -836749.3
Households: 26529	

Scenario 1 (10% Reduction):	Scenario 2 (15% Reduction):
Monthly rate: \$8.00	Monthly rate: \$8.00
Unit fee: \$1.00	Unit fee: \$1.00
Excess units: (615,124)	Excess units: (711,237)
Input unit sales: 0	Input unit sales: 0
Revenue: Monthly: \$212,232	Revenue: Monthly: \$212,232
Annual: \$2,546,784	Annual: \$2,546,784
Unit sales: \$0	Unit sales: \$0
Total: \$2,546,784	Total: \$2,546,784

Program Costs:	Program Costs:
Fixed costs: \$2,713,282	Fixed costs: \$2,713,282
Disposal costs: \$1,034,910	Disposal costs: \$977,415
Program costs: \$3,753,192	Program costs: \$3,695,697
Excess/(shortfall): (\$1,206,408)	Excess/(shortfall): (\$1,148,913)

Scenario 5 (30% Reduction):	Scenario 6 (35% Reduction):
Monthly rate: \$8.00	Monthly rate: \$8.00
Unit fee: \$1.00	Unit fee: \$1.00
Excess units: (999,577)	Excess units: (1,095,890)
Input unit sales: 0	Input unit sales: 0
Revenue: Monthly: \$212,232	Revenue: Monthly: \$212,232
Annual: \$2,546,784	Annual: \$2,546,784
Unit sales: 0	Unit sales: 0
Total: \$2,546,784	Total: \$2,546,784

Program Costs:	Program Costs:
Fixed costs: \$2,713,282	Fixed costs: \$2,713,282
Disposal costs: \$804,930	Disposal costs: \$747,435
Program costs: \$3,523,212	Program costs: \$3,465,717
Excess/(shortfall): (\$976,428)	Excess/(shortfall): (\$918,933)

PAYT Year	Administrative costs	Set-out Level(cans)	%-age of households
1	7968.7	1	30.00%
2	7968.7	2	30.00%
3	5305.8	3	20.00%
4	5305.8	4	20.00%
Total			

Scenario 3 (20% Reduction):	Scenario 4 (25% Reduction):
Monthly rate: \$8.00	Monthly rate: \$8.00
Unit fee: \$1.00	Unit fee: \$1.00
Excess units: (807,350)	Excess units: (999,577)
Input unit sales: 0	Input unit sales: 0
Revenue: Monthly: \$212,232	Revenue: Monthly: \$212,232
Annual: \$2,546,784	Annual: \$2,546,784
Unit sales: \$0	Unit sales: \$0
Total: \$2,546,784	Total: \$2,546,784

Program Costs:	Program Costs:
Fixed costs: \$2,713,282	Fixed costs: \$2,713,282
Disposal costs: \$919,920	Disposal costs: \$862,425
Program costs: \$3,638,202	Program costs: \$3,580,707
Excess/(shortfall): (\$1,091,418)	Excess/(shortfall): (\$1,033,923)

Scenario 7 (40% Reduction):	Scenario 8 (45% Reduction):
Monthly rate: \$8.00	Monthly rate: \$8.00
Unit fee: \$1.00	Unit fee: \$1.00
Excess units: (1,191,804)	Excess units: (1,287,813)
Input unit sales: 0	Input unit sales: 0
Revenue: Monthly: \$212,232	Revenue: Monthly: \$212,232
Annual: \$2,546,784	Annual: \$2,546,784
Unit sales: 0	Unit sales: 0
Total: \$2,546,784	Total: \$2,546,784

Program Costs:	Program Costs:
Fixed costs: \$2,713,282	Fixed costs: \$2,713,282
Disposal costs: \$689,940	Disposal costs: \$632,445
Program costs: \$3,408,222	Program costs: \$3,345,727
Excess/(shortfall): (\$861,439)	Excess/(shortfall): (\$803,945)

Pre-PAYT Trash	Expected PAYT Reduction	Reduced Disposal
Included: 413,852	Scenario: 1	Units
Excess: 0	10%	25,951
827,705	15%	24,509
0	20%	23,067
275,902	25%	21,625
551,803	30%	20,184
551,803	35%	18,742
827,705	40%	17,300
		689940
		1,153,360

Program Costs:	Program Costs:
Fixed costs: \$2,713,282	Fixed costs: \$2,713,282
Disposal costs: \$862,425	Disposal costs: \$804,930
Program costs: \$3,580,707	Program costs: \$3,523,212
Excess/(shortfall): (\$1,033,923)	Excess/(shortfall): (\$976,428)

Option D: Three-Can Limit with excess trash fee

Fixed component plus disposal for 3 cans trash

PAYT Year
Administrative costs

\$5,000

Base Year Trash Units

Potential PAYT Reduction

Reduced
Disposal
Units

Base Year	Base Year	Set-out Level(cans)	%-age of households	Included	Excess	Reduction	Trash(tons)	Costs	Units
MSW volume:	28,834	1	30.00%	413,852	0	10%	25,951	\$1,034,910	1,730,040
Disposal fee/ton:	\$39.88	2	30.00%	827,705	0	15%	24,509	\$977,415	1,633,927
Unit size(lbs):	30	3	20.00%	827,705	0	20%	23,067	\$919,820	1,537,813
Number of units:	1,922,267	4	20.00%	850,325	283,442	25%	21,626	\$862,425	1,441,700
Households:	26529	5	30%	2,919,587	283,442	30%	20,184	\$804,930	1,345,587
		6	35%			35%	18,742	\$747,435	1,249,473
		7	40%			40%	17,300	\$689,940	1,153,360

Scenario 1 (10% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,189,547)
Input unit sales: 0

Scenario 2 (15% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,285,660)
Input unit sales: 0

Scenario 3 (20% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,361,773)
Input unit sales: 0

Scenario 4 (25% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,574,000)
Input unit sales: 0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: \$0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: \$0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: \$0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: \$0

Total: \$2,865,132

Total: \$2,865,132

Total: \$2,865,132

Total: \$2,865,132

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$1,034,910
Program costs: \$3,753,192

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$977,415
Program costs: \$3,690,697

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$919,920
Program costs: \$3,633,202

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$862,425
Program costs: \$3,575,707

Excess/(shortfall): (\$898,060)

Excess/(shortfall): (\$830,565)

Excess/(shortfall): (\$773,070)

Excess/(shortfall): (\$715,575)

Scenario 5 (30% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,574,000)
Input unit sales: 0

Scenario 6 (35% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,670,113)
Input unit sales: 0

Scenario 7 (40% Reduction):

Monthly rate: \$9.00
Unit fee: \$0.50
Excess units: (1,766,227)
Input unit sales: 0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: 0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: 0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: 0

Revenue:
Monthly: \$238,761
Annual: \$2,865,132
Unit sales: 0

Total: \$2,865,132

Total: \$2,865,132

Total: \$2,865,132

Total: \$2,865,132

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$804,930
Program costs: \$3,523,212

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$747,435
Program costs: \$3,460,717

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$689,940
Program costs: \$3,403,222

Program Costs:
Fixed costs: \$2,713,282
Disposal costs: \$625,425
Program costs: \$3,338,707

Excess/(shortfall): (\$658,090)

Excess/(shortfall): (\$600,565)

Excess/(shortfall): (\$543,090)